

Use this instruction to install the MiniRack in an equipment cabinet or frame and to install rack mount versions of Routermate products into the MiniRack. Instructions are also provided for the AC and DC power supplies.



Figure 1. 6-Slot MiniRack

1.1 Rack Installation

The MiniRack is designed to be easily installed in a standard 19-inch or 23-inch equipment cabinet or frame. 19-inch brackets are standard; 23-inch brackets are optional. Removable mounting ears permit both front and mid-point mounting. The MiniRack can also be secured to a vertical surface, such as a wall or the side of a bench or cabinet.

NOTES

1. The MiniRack is for use in a restricted access location in accordance with Articles 110-16, 110-17, and 110-18 of the National Electrical Code ANSI/NFPA 70.
2. The socket outlet shall be installed near the equipment and shall be easily accessible.

1.2 Front Mounting

The MiniRack comes with the mounting ears attached for front mounting, as shown in Figure 1. Secure the ears to the cabinet rail with hardware of the type supplied by the cabinet manufacturer. Attach each side at both the upper and lower mounting holes.

1.3 Mid-Point Mounting

For mid-point mounting, attach the mounting ears as shown below.

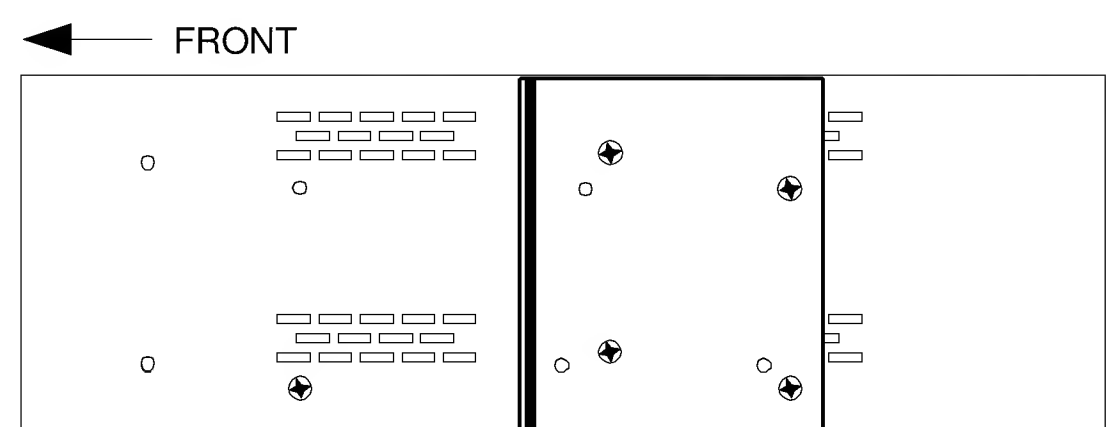


Figure 2. MiniRack - Mid-Point Mounting

1.4 Vertical Mounting

For vertical mounting, attach the mounting ears as shown below.

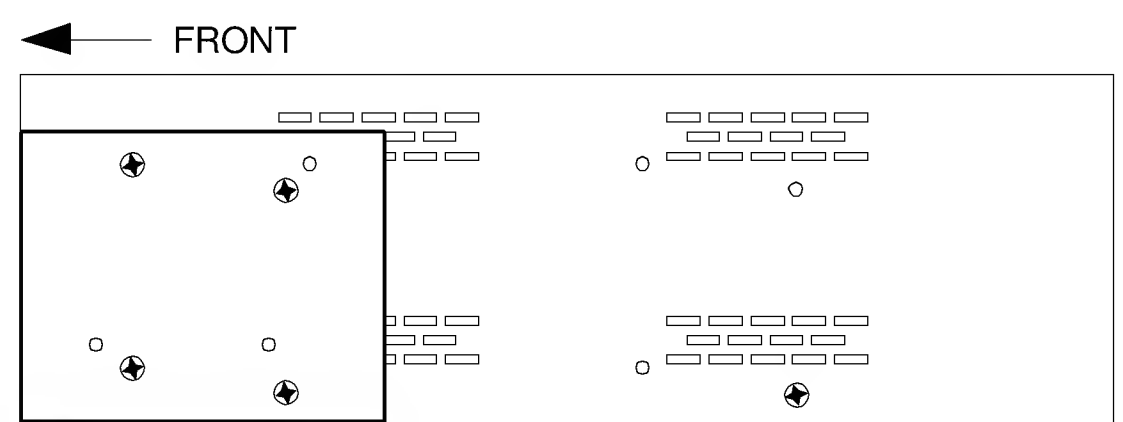
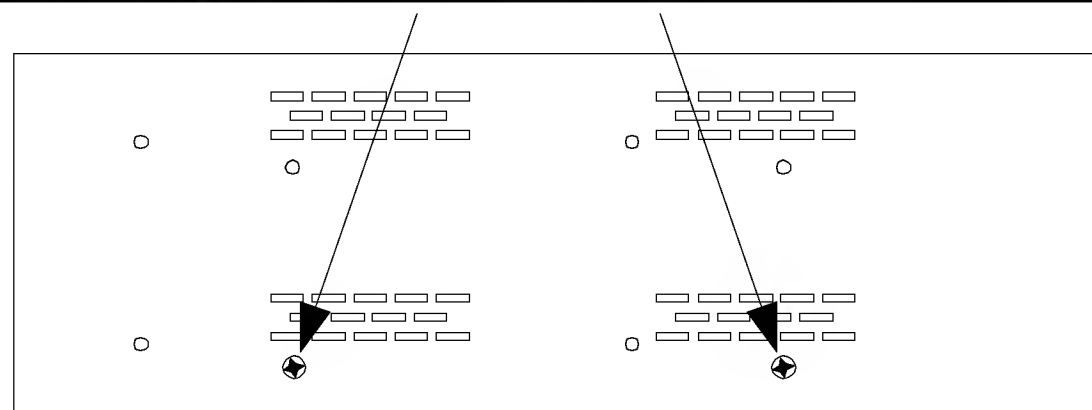


Figure 3. MiniRack - Vertical Mounting

NOTE

There must always be screws in the locations shown in the figure below.



1.5 AC Power Supply

A 115 VAC power transformer is included with each MiniRack. The transformer can be placed conveniently in the bottom of the equipment cabinet or mounted with an optional rack mount kit (see below).

Plug the power cord on the rack into the fused power transformer, then plug the transformer into a 3-prong grounded outlet to ensure proper grounding of the rack chassis. The power transformer input cord is the rack disconnect device.

NOTE

It is not necessary to remove power when inserting or removing cards.

Figure 4 shows how the power transformer is attached to the bracket. The mounting bracket can be attached to either side of the equipment cabinet.

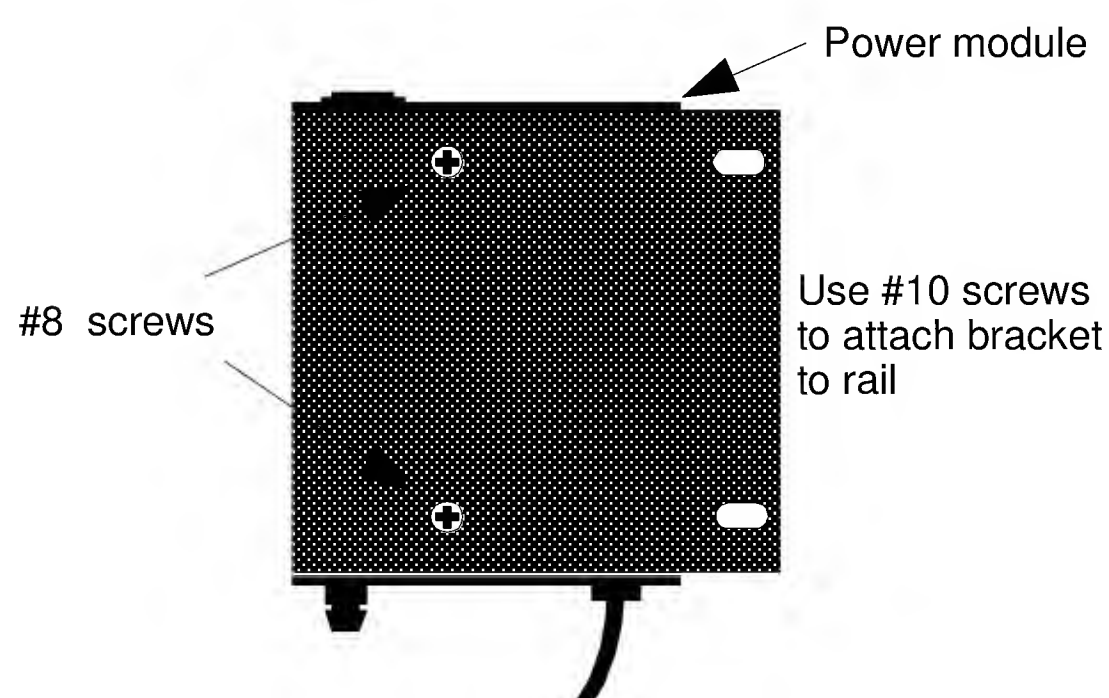


Figure 4. AC Power Module Mounting Bracket

1.6 –48 VDC Power Supply Option

An optional –48 volt DC power supply is also available. The rack-mountable –48 VDC supply provides power for up to three MiniRacks. It contains two redundant power modules to ensure uninterrupted operation.

The left power module is the primary supply; the right power module is the secondary supply and serves as a backup supply that will automatically provide power if the primary supply fails.

If only one power module is used, it can be installed in either slot.

As shown in the figure below, the power supply's circuitry ensures that even if one of the battery inputs and one of the power modules fail, the unit remains functional.

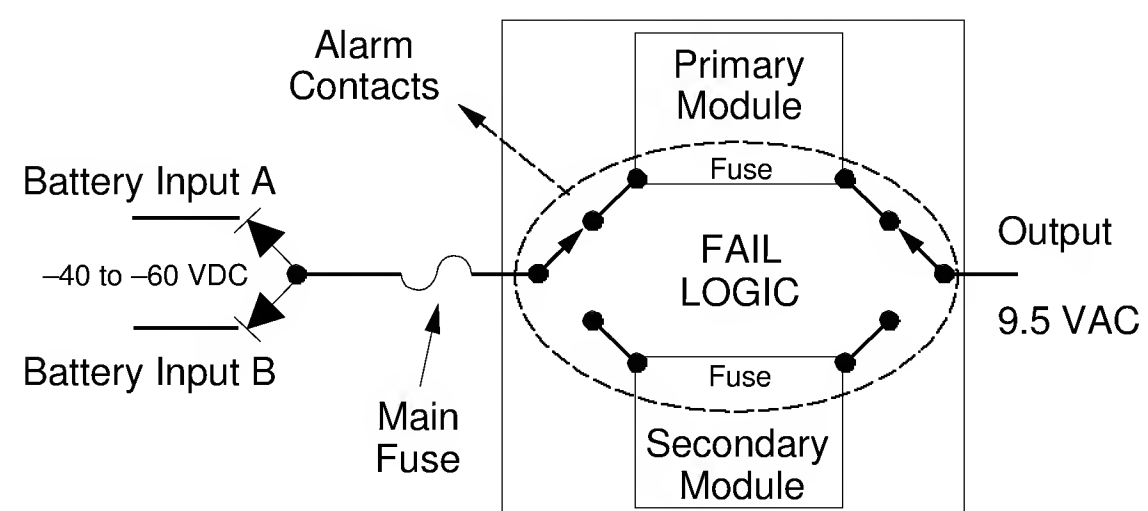


Figure 5. –48 VDC Power Supply Block Diagram

1.6.1 LEDs and Controls

Each of the two user-replaceable power modules contains the following LED indicators.

LED Status		
PWR	FAIL	DESCRIPTION
Green	Off	Active
Yellow/Orange	Off	Standby
Off	X	Failure
X	Red	Failure

PWR - power LED lights green when that module is active. When two power modules are installed, the left one is the primary supply and its PWR LED will be green. The LED on the right (standby) power supply will be yellow/orange.

FAIL - red LED lights if that power module fails. The alarm is activated, and the other module automatically takes over.

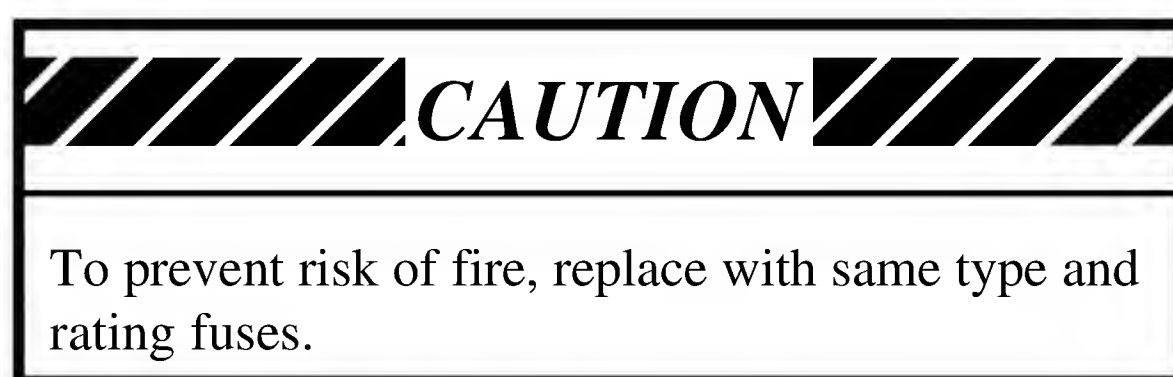
The **ALARM TEST** button on the front is used to test if the **FAIL** LEDs are operating properly. Both indicators light as long as the button is pressed.

1.6.2 Fuses

- The main 6.25 amp fuse on the rear panel protects the power supply from output shorts.
- The three 8 amp unit fuses on the rear panel provide overload protection from the racks connected to the power supply unit.
- Each of the two power modules contain a 6.3 amp fuse which provides overload protection.

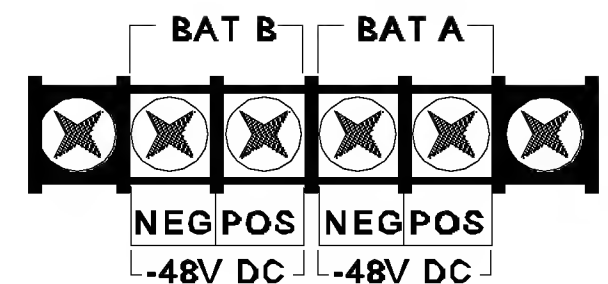
In the event of a **FAIL** indicator, check the fuse on the failed module.

If there are no LEDs lighted, check the fuse on the back.



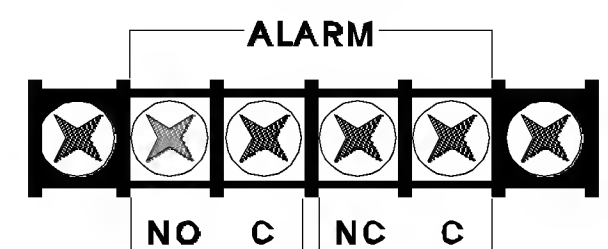
1.6.3 Battery Connections

The battery connectors on the rear panel (Figure 7) each have a NEG (negative) and POS (positive) terminal. Two -48 VDC sources can be connected to ensure uninterrupted operation.



1.6.4 Alarm Connections

The master alarm connectors are labeled NO (normally open), NC (normally closed), and C (common). The terminals connect to two independent relay contacts used for office alarm signaling. The alarm contacts are connected to the two power modules. An alarm is caused by either of the following:



- a power module failure
- both battery inputs fail
- main fuse on back panel opens



Figure 6. -48 VDC Power Supply - Front View

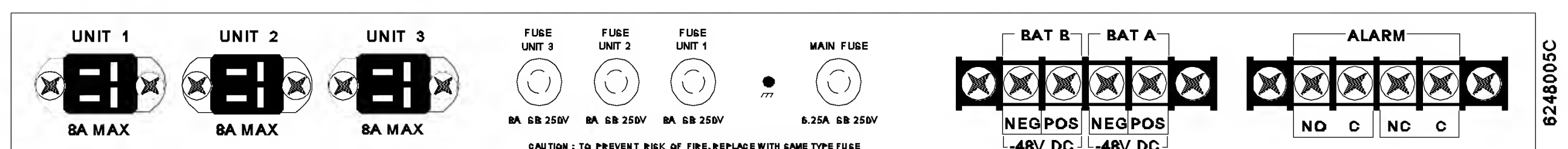


Figure 7. -48 VDC Power Supply - Rear View

1.6.5 Power Module Replacement

It is **not necessary** to switch off or disconnect the –48 volt power source before removing or replacing a power module.

1. Loosen the two thumbscrews.
2. Gently pull the module out.
3. Carefully slide the replacement module in.
4. Tighten the two thumbscrews to ensure firm contact with the connector.

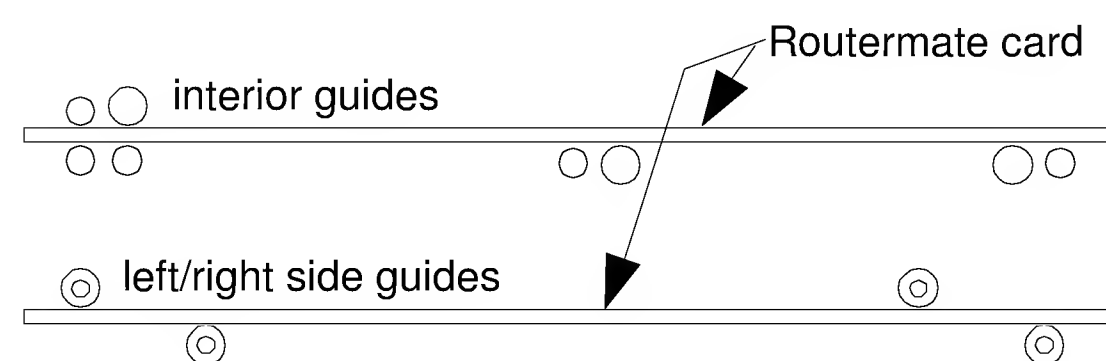
1.6.6 Card Installation

CAUTION

For installations where some slots are empty, always fill the top slots first to prevent damage to cards from objects falling inside. You can also use optional blanking panels to cover unused slots.

Install the Routermate cards in the MiniRack in three simple steps.

1. Attach rear panel (Figure 8)
 - a. Position the two tabs into the slots in the rack.
 - b. Tighten the thumbscrew.
2. Slide card in front
 - a. Insert the card, being careful that it rests on the guides, as shown below.



- b. Firmly push the card all the way in to ensure proper contact with the power connector.

3. Attach front panel
 - a. Gently position the front panel.
 - b. Tighten the two thumbscrews.

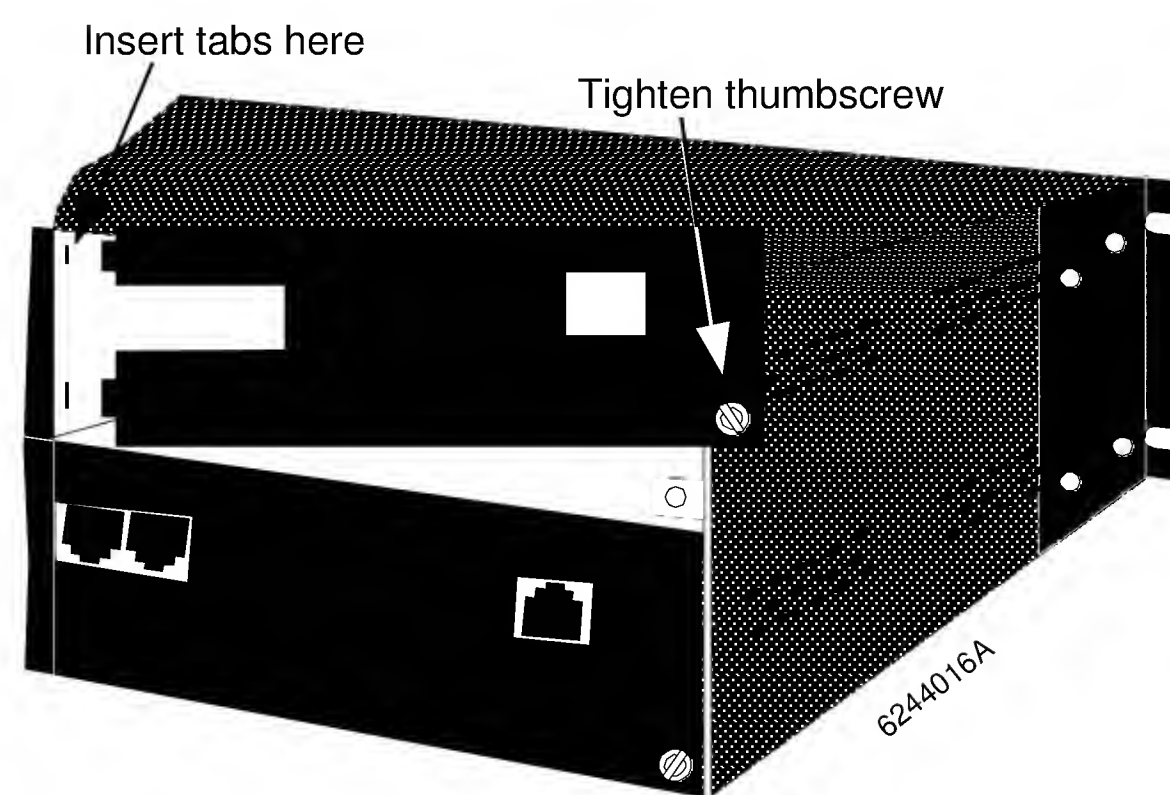


Figure 8. MiniRack - Attach Rear Panel

2.1 Specifications

Specifications	
MiniRack	
Number of slots	Six
Routermates	Any combination of Routermates or Routermate Plus'
Power (fully loaded)	108 to 135 VAC, 57 to 63 Hz; 70 watts maximum
Operating environment	32° to 122°F (0° to 50°C); humidity to 95%, non-condensing
Dimensions	3.5" H x 17" W x 10.5 D
Weight (empty)	7.7 lbs.
AC Power Supply	Input: 120 VAC; 60 Hz; 1 A Fuse: 1.5 A SB, 125V Output: 10 VAC; 10 A maximum
-48 VDC Power Supply (supports up to three MiniRacks)	
Power	Input: -40 to -60 VDC (-48 VDC nominal) @ 6.25 amps max. Fuses: 6.25 amp (main, rear panel) 8 amp (3 rear panel) 6.3 amp on each module Output: 8 to 12 VAC (9.5 nominal) @ 21.6 amps max.
Master alarm contact ratings	AC: 140V, 350 mA, 7W DC: 200V, 0.5A, 10W
Operating environment	32° to 122°F (0° to 50°C); humidity to 95%, non-condensing
Dimensions	1.75" H x 17.25" W x 11.75" D
Weight	6.30 lbs

4800 SERIES ROUTER _{mate} [™]		905-7591-	179-0512-01 REV C	
FOR 120VAC POWER USE PWR MOD 905-7593-01 120VAC 60Hz 1A	FOR 48VDC POWER USE PWR MOD 905-7598-01 48VDC 6.25A	Complies with Part 68 FCC Rules when used with the following registered equipment :		
BARCODE LABEL		Product	Registration No.	Ringer Equivalence
		T1 CSU/DSU	1R5USA-23055-DE-N	N/A
		56K CSU/DSU	1R5USA-23056-DE-N	N/A
		T1 DROP & INSERT	1R5USA-31067-DE-N	N/A
		ROUTER plus T1 CSU	1R5USA-24168-DE-N	N/A
		ROUTER plus 56K CSU	1R5USA-24165-DE-N	N/A
		V.32 MODEM	1R5USA-24168-DE-N	N/A
AFFIX LABEL HERE	AFFIX LABEL HERE	This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions : (1) This device may not cause harmful interference and (2) this device must accept any interference that may cause undesired operation.		
MANUFACTURED BY  Osicom Internetworking Division 9020 Junction Drive Annapolis Junction, MD 20701-1104, U.S.A.		For T1 CSU/DSU : This Class A digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations. Pour T1 CSU/DSU : Cet appareil numerique de la classe A respecte toutes les exigences du Reglement sur la material du Canada.		
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